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* THIS MONTH:
*
* - How to program - Part I
*
* - Disk Survey-How They Rate
*
* - Presidents Message
*
* - Rudy - Oliver Boot Program
*
* - And Other Great Things
*
* If any articles are used please
* credit SMUG Bytes & the author.
*
* -----
* NEXT MEETING DATE: 1/13/88
* -----
*
* Send all contributions by the
* first day of the month to:
*
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* Editor
* SMUG BYTES
* 5052 N. 91st Street.
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Meeting date 3rd Wed. of the
month.

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Meeting date see Spectrum group

An update to the membership list:

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EDITORS Page? well at least a paragraph or two

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I must apologize for the heading in the last issue showing the article on the disks and how they rate. It was planned for the last issue but I was not able to get it in. Look for it in this one.

My apologies to any of you calling the wrong numbers. Please change your list.

TIPS

Thanks to Rod Gowen of RMG Enterprises for this on. Want to use a monitor on the QL? The 5 pin cable, used by Commodore, will work. Use the sound as the video input. Of course still no color. We could use a fix for this.

The other tip is when applying a write protect to your disk becareful not to apply it to tight or you can get read failures

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LETTERS

John Shepard asks:

If there are any problems mixing disk drives?

A. As long as they are Shugart compatable there should be no problem. There could be a problem with the interface if the density and/or sides are mixed. Be sure to tell the interface manufacturer about this.

Has anyone seen or hear from Robert Fischer, author of Extensions for Profile. I wrote to him at a 1986 address in Summerville GA.

A. I leave this up to you readers. If you know of Bobs address send the answer to SMUG Bytes.

I would like to add an inexpensive full keyboard, like Cherry. I will pay for instructions.

A. Any one out there knows how write to SMUG Bytes. I am under the impression it is for a TS2068.

I would like a graphics driver for my IBM compatable Smith-Corona. Fastex 80, printer. Is there a universal IBM compatable driver? Is there a writer who might write a driver?

Larry Anderson asks:

I have bought a Magnavox and can not get it to work with my 2068. I am now using it with a QL.

A. I don't know what the E. Arthur Brown RGB hookup is but there is a way to convert the composite signal into RGB. As to why it won't work with RPM I don't know. I have a Zenith RGB and using the AERCO disk interface with a RGB cable, and have no problem with RPM. I have had a problem with the Zenith on the QL when going into Monitor mode. The picture is to large for the screen.

I hope anyone out there reading

these questions and can answer any of them will send their answers or questions to SMUG Bytes c/o Bill Heberlein, 5052 N. 91st Street, Milwaukee, WI 53225.

Computer Definitions

Hard disk - a floppy that's been in the sun too long.

Bus - public transporation

Expansion Board - city agency issuing building permits

Chips - also known as meadow muffins, supplied by Buffalos

Nanosecond - the length of time to put your soda down near the keyboard

Picosecond - the length of time it takes to realize the soda is now falling into the keyboard because you missed the edge.

FROM THE PRES.

The Winter Computerfest is approaching fast and I am wondering how many of you will be going? Plans are still up in the air, but, hope to go myself. If we get 3 or 4 maybe we could share the driving and the expenses. SMUG has tried to be represented at all the Sinclair Fests in the U.S. The only one we missed so far is the Northwest one. Not our fault but all the ads were after the fact.

Another reminder coming up Saturday January 9th at the Waukesha Expo Center will be a Ham, Computer and Video fest. For more info contact Rudy. Interested in selling anything maybe we can get a group to share a table or two.

Disk Makers Ire Stirred By Tester
By Marsha Johnston Fisher

From the 11/2/87 issue of MIS Weekly

Manufacturers of 5.25" floppy diskettes were scrambling Friday to respond to a survey by a disk test and duplication firm here that suggests they are not testing comprehensively for all of the minimum standards specified by the American National Standards Institute (ANSI) for interchangeability and performance.

Memory Control Technology Corp. (Memcon) examined 100 disks, each of 18 different brand names, from different distributors around the country, for visual defects, measured for "missing" and "extra" bits as indicators of surface quality, and tested the magnetic coating characteristics, durability and most basic PC formatting capacity.

While all 18 manufacturers passed the durability test with flying colors, problems arose with specific vendors, particularly on the ANSI extra bit test and the visual inspection, which is not ANSI-specified.

...Extra and missing bits are minute defects on the disk surface that may cause errors in data storage or recovery. The ANSI committee said an extra bit occurs whenever a pulse greater in amplitude than 20% of the average signal is detected after a track has been erased. A missing bit is said to occur when the recorded signal is less than 40% of the average signal level.

Its (the ANSI committee's) consensus was to establish the extra bit test, he said. "because it was

specifically relevant to an end-user. It's probably the most critical of all the tests to the end-user "because if the disk suffers from an extra bit error, you get an error in the data you're putting on the disk."

...Only three manufacturers-BASF, JVC and Memorex-had 100% of their disks pass both of the surface quality tests.

Kodak, Nashua, Sony and 3M had 100% success in the missing bit test, but did not do as well on the extra bit. ...

Other extra bit failures came from Dycan/Xidex with 39 failures of 200 disks, Sentinel 9 and Polaroid 7.

... Of the manufacturers which did not have 100% success rate on the missing bit test, Korth (Memcon's CEO) said he graded those that had only one disk fail with a grade of 'C.' They were Fuji, Maxell, Polaroid, Syncrom and Verbatim.

... TDK and Goldstar, which had 100% success with the extra-bit test, had 2 and 3 disks, respectively, fail the ANSI missing bit test. ...

Finally, "to put the technical test in to a user perspective, we stuck them in a PC, formatted them, put a data pattern in the data field and tried to recover it using an IBM PC-compatible," Korth said.

The fact that the majority of the disks passed "should be no consolation to the user," Korth said. "The tests from ANSI were designed to insure interchangeability and long-term reliability, so that the disks could be formatted on one PC at one moment in time doesn't mean that it would work with someone else's PC or six months from now."

So you want to write a program!

Well you have to follow a few rules. They can't guarantee a working program, that's still up to you, but they will help.

The first thing is to eliminate distractions. I find the TV will distract but the radio can drown out the outside noise. The next thing is to write down what you want to accomplish. For example; I want a program to keep names and addresses plus birthdays, and other pertinent notes. I want to list them alphabetically, by birthdate and a search of the note area for certain words. Using either 80 col. printer or to the screen.

Once you have your idea written down you have a base to work from. Now the idea is to break the idea down into manageable chunks or in programming language, functions. Now you can take each of these chunks and break it into smaller pieces. When you can see, in your mind, how to program it the function is small enough. The function should be a complete unit. For example; Menu, Update the list, Sort, Print or Save. The other thing you should do is draw, flowchart, as you do alone. If you do this then all the steps to get to this point won't be forgotten. Using the example from the first paragraph this is how to break it down into functions.

Notice the menu is the first function. Then the menu is broken into six smaller functions. Now take each of these functions and break them down. Lets take the New List function. Now what do we have to do to start a new list of names and addresses? Well we will have to define the dimension string so it will not contain any data. We will have to set the last entry pointer to 0. Also any other controlling switches, fields or necessary data must be set to the starting values. You can lay this out in the same way as the first level was layed out. See layout 2.

You try the next one and see what you get. More next time.

NAME AND ADDRESS LIST

MENU

I

I

<<NEW LIST>> <<UPDATE LIST>> <<SORT DATA>> <<PRINT>> <<SAVE DATA>> <<QUIT>>

<<NEW LIST>>

I

<<DIMENSION>> <<END POINTER>> <<SET SORT KEY>> <<RETURN>>

<<UPDATE LIST>>

I

<<GET KEY>> <<PUT TO SCREEN>> <<UPDATE RECORD>> <<REWRITE>> <<RETURN>>

FOR SALE:

If you have anything for sale, you can advertise it for free in this newsletter (provided you're a SMUG member). Our newsletter reaches an ever-growing number of TS User Groups throughout the country, increasing your chances of a sale.

Dr. Lloyd Dreger has his second "Machine Code" book ready. This book takes up where the last one left off. This book will take you deeper into the intricacies of that monster, machine code programming.

The price will be the same as the other book \$16.95 (SMUG members \$15.00) plus \$1.50 S&H if not picked up in person.

Multiple Disk Systems

On Wednesday the 18 of November, the Spectrum group met. Dennis Nickel, who has built an off/on switch for his Oliker disk interface, and myself, my disk interface is an AERCO, tried piggly backing our two interfaces. We tried the AERCO first, it does not have an off/on switch, and plugged the Oliker on behind. Then with the Oliker off we booted up the system. Everything was ok so far. Then using "OUT 244,0", to turn off the AERCO interface, we turned the Oliker on. Well we crashed. We then turned off the TS2068, turned on the Oliker switch and turned on the computer. It was a crash from the beginning. What we are after is the ability to transfer data from one disk system to the other. If anyone out there knows a way that works please let us know.

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"SQ" NOTES

BY R.A.HILSMANN

"S" in this case will stand for "SDOS", "SPECTRUM" and "SOFTWARE". As most who already know me would know, those are a few of the things which will keep my interest in the TS2068 alive.

I added "Q" for the Sinclair QL which is the newest of the computers used here. What's this all about? A NEW COLUMN for this Newsletter, that's what. I hope to be able to keep up with all the writing I promised to do, but all I can do is try, so here goes.

Things that will be covered are software and ideas to improve the system. System in this case means SDOS, SPECTRUM, QL and SOFTWARE.

As a starter here is a new MENU PROGRAM I wrote for the SDOS system, which I would like to share with you. This program will not only list the contents of the disk but will also function as a head-scan. In other words, it will give you the location and length of each program, be it basic, code or data, and display such information along with the name of the item upon "LOAD & ENTER". Basic is indicated as LINE, which means the starting line the program has to be called with. ABS indicates the program is saved as state of the machine, while VAL means variables.

On the top of the screen you will find information pertaining to the disk in use, such as disk name, number of tracks the disk is formatted to, number of sides, total bytes in K, and also the amount of bytes still available on the disk.

The cursor, in this case an inverted bar, can be moved as usual downwards with any key to the item of your choice, and by pressing "ENTER" the program, code or data is then loaded into the 2068 system. This Menu Program will also give an audible signal upon roll-over of the whole menu, indicating the beginning of the menu text.

Enter the listing given here, then do a "GOTO 200" to activate it. Line 200 to 350 will be deleted as you do so, and line 10 will hold the code necessary to make this program functional, line 10 will also be changed to line 0, since it should not ever be taken down to be edited, this would surely wipe out the code it contains.

Enter the program with the 2068 being in the TIMEX mode, otherwise the delete function will not work, although the program will function in either the spectrum or timex mode. Now you may save the program to file 0. This version of this program takes into account the latest version of Oligers SDOS, but you may change the FOR/NEXT loop to the old standard using a variable such as X. The loss of speed will be insignificant.

I hope you like it! Next month I will start to write about changing a few major programs, such as VU-FILE, to the 80 column printer.

till then.....Rudy Hilsmann.

```
10 REM 1
      2
      3
      12345678901234
15 REM USE KEYWORDS FOR D$ IN
      LINE 20
20 CLEAR: LET A=NOT PI: LET B
=A: LET C=A: LET D=A: DIM A$(179
,20): DIM B$(32): DIM C$(608): I
NK 9: PAPER A: BORDER A: CLS : L
ET E=PEEK 23635+256*PEEK 23636+5
: LET F=USR E: LET D$=" LINE DAT
A DATA CODE ABS VAL ": PRINT "DI
SK NAME: ";A$(178) 'CODE A$(179,
1);" TRKS, ";CODE A$(179,2);" SI
DES=";CODE A$(179,3)*5;"K FREE
";CODE A$(179,5)*5;"K" '-----
-----": GO TO
      VAL "60"
30 LET G=3: LET H=1: FOR /I TO
J: PRINT AT G,0; INVERSE 1; OVE
R 1;B$: PAUSE 0: LET Q$=INKEY$:
IF Q$=CHR$ 13 THEN GO TO 150
40 PRINT AT G,0; INVERSE 0;B$:
GO SUB 100: NEXT : PRINT AT 3,0
```

```

;C$: IF A>F THEN RANDOMIZE USR E
: GO TO 60
50 RETURN
60 BEEP .08,35: LET I=2: LET J
=0
70 LET G=3: LET H=NOT PI: IF F
-I>18 THEN LET J=J+18: GO TO 90
80 LET J=F+1
90 LET K=PEEK 32768+256*PEEK 3
2769: FOR /I TO J
100 RANDOMIZE USR (E+64): PRINT
AT G,0;A$(A-1, TO 10);";";D$(B+
1);TAB 17;: IF NOT B AND D>1E4 T
HEN PRINT 0;: GO TO 120
110 PRINT D;
120 PRINT TAB 22;";";C: LET G=G
+1: IF H THEN RETURN
130 NEXT : POKE 32768,K-256*INT
(K/256): POKE 32769,INT (K/256)
: GO SUB 30: IF A-1<=F THEN LET
I=A
140 GO TO VAL "70"
150 LET L$=A$(A-VAL "1", TO VAL
"10"): GO SUB VAL "150"+CODE A$
(A-VAL "1",VAL "11")+VAL "1": ST
OP
151 LOAD /L$: RETURN
152 LOAD /L$ DATA A(): RETURN
153 LOAD /L$ DATA B$(): RETURN
154 LOAD /L$CODE : RETURN
155 LOAD /L$ABS
156 LOAD /L$VAL : RETURN
200 RESTORE 300: FOR X=26715 TO
26825
210 READ L: POKE X,L
220 NEXT X: POKE 26711,0: DELET
E 200,
230 REM ****
* USE GOTO 200 TO ACTIVATE *
* THEN SAVE USING *
* CLEAR: SAVE /0 *
*****
300 DATA 205,10,0,42,75,92,17,3
2,0,25,235,33,32,38,1,212,13
310 DATA 237,176,33,16,38,14,16
,237,176,229,235,17,4,0,25,235,3
3,0,38,14,16,237
320 DATA 176,225,17,20,0,62,128
,190,40,4,3,25,48,249,42,75,92,1
7,42,0,25,34
330 DATA 0,128,223,42,75,92,17
,9,0,25,237,91,0,128,26,119,213,1
7,6,0,25,209
340 DATA 19,26,119,19,35,26,119
,213,17,5,0,25,209,19,26,119,19
,35,26,119,33,16
350 DATA 0,25,34,0,128,201

```

TWAS THE NIGHT BEFORE CHRISTMAS

'Twas the night before Christmaas, quiet more or less,
Not a creature was stirring, except DOS.
The wish list was hung by the tape drives with care,
In hopes that St. IBM soon would be there.

The programmers were nestled all snug in their beds,
While completion code zeros danced all through their head.
And all of them trying to dodge any flap,
Had just settled down for a long winter's nap.

When out on the lawn there arose such a din,
I hoped right away it was not an abend.
Away to Control we fled like a flash,
To open the shutters (for there was no sash).

When what to our wondering eyes should we see,
But a giant mainframe and eight tiny pcs.
With a little old driver (no one could be cuter),
And I knew right away it was old St. Computer.

More rapid than nanos his coursers they came,
And he whistled and shouted and called them by name.
"Now Victor, now Apple, Atari, and Osborne."
"On Sinclair, on Compaq, we'll be there by morn."

To the top of MIS lickety-split,
Now respond, now respond, now respond real quick.
And then in a twinkling I heard at the door,
The beeps of the tubes led by old Commodore.

As I drew in my head and was turning around,
Through the door St. Computer came in with a bound.
He was dressed all in modems (the strangest of sights),
And his clothes were all tranished with circuits and bytes.

A sack full of products (he sure had a bunch),
Just like a vendor without the free lunch.
His eyes how they twinkled, his dimples how deep,
His cheeks were like cursors, his nose made a beep.

He was chubby and plump, a right jolly old man,
And I thought he could help us with our very own LAN.
He said not a word but went straight to his work,
And I knew that his basic would be clear with no murk.

And laying his finger aside of his ear,
I felt with his system we'd nothing to fear.
He sprang to his mainframe, and then he hit ENTER.
And away they all flew through the darkness of winter.

But I herd him exclaim with a great sense of fun,
"Merry Christmaas to all, and may all your jobs run."